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AMS-513

# Historical Review of Changes in the Grain Standards of the United States

U.S. DEPARTMENT OF AGRICULTURE  
Agricultural Marketing Service  
Grain Division



# HISTORICAL REVIEW OF CHANGES IN THE GRAIN STANDARDS OF THE UNITED STATES

The United States Grain Standards Act was passed by Congress on August 11, 1916. The first standards established under the Act were for corn, which became effective December 1, 1916. Since then, standards have been developed for wheat, oats, rye, grain sorghum, barley, flaxseed, mixed grain, and soybeans.

The standards for the various grains have been revised or amended from time to time. This publication contains a review of these revisions and amendments, arranged chronologically.

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Washington, D. C.

September 1963

## CORN

Established effective December 1, 1916

Revised effective July 15, 1918

1. Defined corn as shelled corn of the flint or dent varieties.
2. Changed the heading of the grade factor "heat damaged and mahogany kernels" to "heat damaged kernels" and raised the allowance for this factor in the six numerical grades from 0.0, 0.0, 0.0, 0.5, 1, and 3 percent to 0.0, 0.1, 0.3, 0.5, 1.0, and 3.0 percent.
3. Added minimum test weight per bushel of 51, 49, 47, and 44 pounds for the grades Nos. 3, 4, 5, and 6.
4. Added the terms "commercially objectionable foreign odor" and "heating" and dropped the term "fire burned" in the definition for Sample grade.
5. Deleted the terms "immature" and "badly blistered" from the definition of grade No. 6.

Amended effective October 3, 1921

Changed from a 14/64 to a 12/64 inch sieve for determining foreign material and cracked corn.

Amended effective August 15, 1924

Changed the grading of corn infested with live weevils from Sample grade to a grade "Weevily."

Revised effective September 1, 1934

1. Reduced the number of numerical grades from six to five, redesignated the grade Weevily corn as a special grade, and established a special grade for Flint corn.
2. Total damage was liberalized from 2, 4, 6, 8, 10, and 15 percent to 3, 5, 7, 10, and 15 percent, and heat damage was liberalized from 0.0, 0.1, 0.3, 0.5, 1, and 3 percent to 0.1, 0.2, 0.5, 1.0, and 3.0 percent in the several numerical grades.
3. The definition of Sample grade was changed to include musty and sour corn which was previously included in grade No. 6.

4. Test weights for the several grades were changed from 55, 53, 51, 49, 47, and 44 to 54, 53, 51, 48, and 44.
5. The percentage of other grains was limited to 10 percent. Prior to this change, there was nothing in the corn standards about other grains, and other grains were limited by the amount of foreign material and cracked corn.
6. Moisture in grades 4 and 5 was changed from 19.5 and 21.5 percent to 20.0 and 23.0 percent.
7. Cracked corn and foreign material in grade No. 5 was changed from 6 percent to 7 percent.

Amended effective July 1, 1935

Changed the basic method for determining moisture from the Brown-Duvel to the water-oven method or any method giving similar results.

Amended effective January 20, 1937

Changed the special grade for "Flint" corn and added a special grade "Flint and Dent" corn.

Revised effective October 1, 1959

1. Changed the basic method for determining moisture from water-oven to air-oven.
2. Changed the minimum test weight per bushel from 54, 53, 51, 48, and 44 pounds to 56, 54, 52, 49, and 46 pounds for grades Nos. 1 through 5.

## WHEAT

Established standards for Hard Red Winter Wheat, Soft Red Winter Wheat, Common White Wheat and Club Wheat effective July 1, and standards for all other wheat effective August 1, 1917

Revised effective July 15, 1918

1. Eliminated the subclasses Red Spring Humpback and Soft Red. Wheat of the variety Humpback was included in the subclass Red Spring. A grade "Garlicky" was established which applied to all classes and took the place of subclass Soft Red in the class Soft Red Winter Wheat. The class name Common and Red Durum Wheat was changed to Durum Wheat.
2. Changed the minimum limits of dark, hard, and vitreous kernels in the subclass Dark Hard Spring from 85 percent to 75 percent, in the subclass Dark Hard Winter from 90 percent to 80 percent, and for No. 1 Dark Hard Winter from 95 percent to 80 percent.
3. Changed the definition for the subclass Hard White from not more than 20 percent of kernels of soft and chalky texture to 75 percent or more of hard (not soft and chalky) kernels, and for the subclass Soft White from more than 20 percent of kernels of soft and chalky texture to less than 75 percent of hard (not soft and chalky) kernels.
4. Changed the minimum test weight per bushel for grade No. 1 for all subclasses of Hard Red Spring Wheat from 59 pounds to 58 pounds. Changed the minimum test weight per bushel for all subclasses of Durum Wheat, Hard Red Winter Wheat and the subclass Red Winter of the class Soft Red Winter Wheat from 61, 59, 57, 55, and 53 pounds for grades Nos. 1 through 5 to 60, 58, 56, 54, and 51 pounds. Changed the minimum test weight per bushel for the subclass Red Walla of the class Soft Red Winter Wheat from 60, 58, 56, 54, and 52 pounds for grades Nos. 1 through 5 to 58, 56, 54, 52, and 49 pounds, and from 52 pounds to 51 pounds for grade No. 5 for all subclasses of White Wheat.
5. Changed the maximum limits of damaged kernels in grade No. 1 from 1 percent to 2 percent and of heat-damaged kernels from no heat-damaged kernels and 0.1 percent in grades No. 1 and No. 2 to 0.1 percent and 0.2 percent.
6. Changed the names of grading factors "Inseparable foreign material" and "Kinghead, corncockle, vetch, darnel, and wild rose" to "Foreign material other than dockage" and "Matter other than cereal grains." Changed the maximum limits of foreign material other than dockage from 0.5, 1, 2, 4, and 6 percent for grades Nos. 1 through 5 to 1, 2, 3, 5, and 7 percent, and of matter other than cereal grains from 0.25,



0.5, 1, 2, and 3 percent for grades Nos. 1 through 5 to 0.5, 1.0, 2.0, 3.0, and 5.0 percent.

7. Changed the maximum limits of wheats of other classes for all classes except Durum Wheat from 2, 4, and 6 percent in grades Nos. 1, 2, and 3 to 5, 10, and 10 percent.

Changed the maximum limits of wheats of other classes in the subclasses Amber Durum and Durum in the class Durum Wheat from 2 percent in grade No. 1 to 5 percent.

Changed the maximum limits of wheats of other classes in the subclass Red Durum in the class Durum Wheat from 2, 4, and 6 percent for grades Nos. 1 through 3 to 5, 10, and 10 percent.

Changed the maximum limits of common white, white club, and durum wheat, singly or combined, in the classes of Hard Red Spring Wheat and Hard Red Winter Wheat from 1, 2, 3, 5, and 5 percent for grades Nos. 1 through 5 to 2, 5, 10, 10, and 10 percent.

Changed the maximum limits of soft red winter, common white, and white club wheat, singly or combined, in the subclasses Amber Durum and Durum of the class Durum Wheat from 1, 5, 5, 5, and 5 percent in grades Nos. 1 through 5 to 2, 5, 10, 10, and 10 percent.

Changed the maximum limits of soft red winter, common white, and white club wheat, singly or combined, in the subclass Red Durum of the class Durum Wheat from 1, 2, 3, 5, and 5 percent for grades Nos. 1 through 5 to 2, 5, 10, 10, and 10 percent.

Changed the maximum limits of soft red winter, common white, and white club wheat, singly or combined, in the subclasses Amber Durum and Durum of the class Durum Wheat from 1, 5, 5, 5, and 5 percent in grades Nos. 1 through 5 to 2, 5, 10, 10, and 10 percent.

Changed the maximum limits of soft red winter, common white, and white club wheat, singly or combined, in the subclass Red Durum of the class Durum Wheat from 1, 2, 3, 5, and 5 percent for grades Nos. 1 through 5 to 2, 5, 10, 10, and 10 percent.

Changed the maximum limits of durum wheat in the classes of Soft Red Winter and White Wheat from 1 percent in each of the grades Nos. 1 through 5 to 2, 3, 10, 10, and 10 percent.

8. Changed the maximum moisture limits for the classes Hard Red Spring Wheat and Durum Wheat from 13.5, 14.5, 14.5, 15.5, and 15.5 percent for grades Nos. 1 through 5 to 14.0, 14.5, 15.0, 16.0, and 16.0 percent.

Changed the maximum moisture limits for the classes Hard Red Winter Wheat, Soft Red Winter Wheat, and White Wheat from 13, 13, 14, 14,



and 15 percent for grades Nos. 1 through 5 to 13.5, 14.0, 14.5, 15.5, and 15.5 percent.

9. Added a grade for Garlicky Wheat, Treated Wheat, and Smutty Wheat and changed the method of expressing the grades for Mixed Wheat.
10. Excluded emmer, spelt, and einkorn from the definition for wheat.
11. Changed the method of expressing dockage from whole and halves of a percent to whole percents.

Amended effective August 15, 1921

Eliminated "bright" from the No. 1 grade requirements.

Amended effective July 17, 1922

Combined the classes Common White and White Club into one class White Wheat with three subclasses Hard White, Soft White, Western White, and changed the subclass Red Walla to Western Red.

Amended effective August 15, 1924

1. Established the grade No. 1 Hard Spring for Hard Red Spring Wheat with 85 percent or more dark, hard, and vitreous kernels and test weight of not less than 60 pounds.
2. Provided grades for Mixed Durum, for Mixed Wheat with more than 70 percent of durum and not more than 5 percent of soft red winter and/or white wheat.
3. Changed the test weight per bushel requirements for the several numerical grades of the subclass Western Red from 58, 56, 54, 52, and 49 to 60, 58, 56, 54, and 51.
4. Changed the grading of wheat infested with live weevils from Sample grade to a grade "Weevily."
5. Excluded Polish and poulard wheat from the definition of "wheat."
6. Revised the definition for "Treated wheat."

Revised effective July 2, 1934

1. Removed moisture as a specific numerical grading factor and established a special grade "Tough" for wheat between 14.5 and 16 percent moisture for the classes Hard Red Spring, Durum, and Red Durum and for wheat between 14 and 15.5 percent moisture for the classes Hard Red Winter, Soft Red Winter, and White Wheat. Wheat with more than the maximum moisture permitted in the special grade "Tough" was graded Sample grade.

2. Divided the class Durum into two classes, Durum and Red Durum. Durum was divided into three subclasses, Hard Amber Durum, Amber Durum, and Durum. The subclass White Club was added to the class White Wheat, and a slight change was made in the definition of the subclass Western White.
3. The definition of Sample grade was changed to include musty and sour. Musty and slightly sour had been graded No. 5.
4. The grade No. 1 Hard Spring was dropped and No. 1 Heavy was adopted for Hard Red Spring Wheat with a test weight of 60 pounds.
5. The percentage of dark, hard, and vitreous kernels in the subclass Dark Hard Winter was changed from 80 percent to 75 percent.
6. Redesignated the grades Treated wheat, Garlicky wheat, Smutty wheat, and Weevily wheat as special grades and added a special grade Ergoty wheat.
7. The special grade Garlicky was liberalized from one or more garlic bulblets to two or more green garlic bulblets or an equivalent quantity of dry or partly dry bulblets per 1000 grams of wheat and the special grade was divided into Light Garlicky and Garlicky, based on the number of bulblets.
8. The special grade Smutty was liberalized from in excess of 2 balls of average size in 50 grams of wheat to 10 balls of average size in 250 grams of wheat, and the special grade was divided into Light Smutty and Smutty based on the quantity of smut.
9. A limit of 10 percent of red durum was allowed in Mixed Durum.
10. Damaged and heat damaged was applied to kernels and pieces of kernels of other grains as well as to the wheat kernels.
11. The determination of other grains in the definition of wheat was on the basis of the wheat before the removal of the dockage rather than on the dockage-free basis as before.
12. Changed the maximum limits of wheats of other classes in all classes of wheat from 5 to 10 percent for grade No. 2.

Amended effective July 25, 1934

Increased the amount of smut in the special grade Smutty from in excess of a quantity equal to 10 balls of average size, to in excess of a quantity equal to 14 balls of average size in 250 grams of wheat.

Amended effective July 1, 1935

Changed the basic moisture method from the Brown-Duvel to the air oven or any method giving similar results.

Revised effective October 1, 1937

1. Prescribed the manner in which the grade designation for mixed wheat was to be written and changed the grade requirements for Mixed Durum to provide that wheat with not less than 60 percent of kernels that are hard and vitreous and of amber color be designated as Amber Mixed Durum.
2. Limits of 7 percent of shrunken and broken kernels in the top two grades and 10 percent in grade No. 3 were provided.

Amended effective August 2, 1954

The method of expressing smut dockage was changed.

Revised effective June 15, 1957

1. Changed the maximum limits of foreign material from 1.0, 2.0, 3.0, 5.0, and 7.0 percent in grades Nos. 1 through 5 to 0.5, 1.0, 2.0, 3.0, and 5.0 percent.
2. Eliminated the factor "matter except other grains."
3. Changed the maximum limits of "shrunken and broken kernels" from 7 percent for grades No. 1 and No. 2 and 10 percent for grade No. 3 to 5.0 percent and 8.0 percent.
4. Changed the maximum limits of "wheats of other classes" in grade No. 2 from 10 percent to 5.0 percent.
5. Changed the minimum limits of "dark, hard and vitreous kernels" in the subclass Hard Winter Wheat from 25 percent to 40 percent.
6. Eliminated "Amber Mixed Durum" and "Mixed Durum" from the grade designation in the class Mixed Wheat.
7. Provided that "distinctly low quality" be determined on the basis of the grain as a whole.

## OATS

Established effective June 16, 1919

Amended effective August 15, 1924

Changed the grading of oats infested with live weevils from Sample grade to a grade "Weevily."

Revised effective September 1, 1925

1. Changed definition of oats from cultivated oats with not more than 25 percent of foreign material, other grains, and wild oats to any grain which consisted of 80 percent or more of cultivated oats and not more than 10 percent of foreign material.
2. Dropped the grade "Clipped Oats."

Amended effective August 30, 1928

Established a grade for cereal oats.

Revised effective July 2, 1934

1. Changed definition of oats to permit not more than 10 percent of wild oats.
2. Liberalized the factor of general appearance. Stained appearance was eliminated, but slightly weathered oats was not to be graded higher than No. 3, and badly stained or materially weathered was not to be graded higher than No. 4.
3. Raised test weight in grades Nos. 2, 3, and 4 from 29, 26, and 23 pounds to 30, 27, and 24 pounds.
4. Lowered sound cultivated oats in grades No. 1 and No. 2 from 98 and 95 percent to 97 and 94 percent.
5. Changed definition of Sample grade to include musty oats, which previously were graded No. 4.
6. Redesignated the grades for Bleached oats, Weevily oats, and Cereal oats as special grades and established special grades for Tough Oats, Heavy Oats, Extra Heavy Oats, Bright Oats, Smutty Oats, Ergoty Oats, and Garlicky Oats.



7. The special grade "Cereal Oats" was based on more than 20 percent of oats and/or other matter passing 0.064 x 3/8 inch slotted sieve instead of on appearance of being sized.

Amended effective July 1, 1935

1. Changed the basic method for determining moisture from the Brown-Duvel to the air-oven method or any method giving similar results.
2. Maximum limits of foreign material were increased in grades No. 2 and No. 3 from 2 and 3 percent to 3 and 4 percent.
3. Special grade "Cereal Oats" amended to exclude fine seeds. Fine seeds defined so they functioned as part of foreign material.
4. Provided that Smutty Oats shall be determined on the basis of smut masses or smut balls in excess of 0.2 percent rather than on basis of in excess of a quantity equal to 30 balls of average size in 250 grams of oats.

Amended effective July 1, 1937

Special grade "Cereal Oats" changed to special grade "Thin Oats."

Amended effective July 1, 1941

Provided a special grade "Special Red Oats" for Columbia or other red oats having similar characteristics.

Amended effective July 1, 1947

Provided for a special grade "Medium Heavy Oats" for grades Nos. 3 and 4 and Sample grade for oats having test weight of 30 or more but less than 35 pounds.

Revised effective June 1, 1959

1. Changed the minimum test weight per bushel from 32, 30, 27, and 24 pounds for grades Nos. 1 to 4 to 34, 32, 30, and 27 pounds.
2. Changed the minimum test weight per bushel from 35 pounds to 36 pounds for the special grade "Heavy Oats."
3. Changed the minimum moisture requirements for tough oats from 14.5 percent to 14.0 percent.
4. The various classes of oats were more specifically defined, and other physical characteristics in addition to color were included in their determination.

## RYE

Established effective July 1, 1923

Amended effective August 15, 1924

Liberalized the factor of heat damaged kernels in grades No. 1 and No. 2 from no heat damage in either grade to 0.1 and 0.2 percent.

Revised effective July 2, 1934

1. Eliminated moisture as a numerical grading factor and established a special grade "Tough" for rye containing more than 14 percent, but not more than 16 percent moisture.
2. Musty and slightly sour included as reason for Sample grade instead of grading such rye as No. 4.
3. Moisture to be determined on dockage-free grain.
4. Redesignated the grade Garlicky rye as a special grade and changed requirements for this grade from one or more garlic bulblets to two or more green garlic bulblets or an equivalent quantity of dry or partly dry bulblets per 1000 grams of rye. Divided the special grade into Light Garlicky and Garlicky, based on the number of bulblets.
5. Redesignated the grade Smutty rye as a special grade, changed the requirements from "in excess of 2 balls of average size in 50 grams of rye" to "10 balls of average size in 250 grams of rye" and divided the special grade into Light Smutty and Smutty based on the quantity of smut.
6. Changed the definition of rye to permit not more than 10 percent of other grains before the removal of the dockage.

Amended effective July 25, 1934

Increased the amount of smut in the special grade Smutty from "in excess of a quantity equal to 10 balls of average size" to "in excess of a quantity equal to 14 balls of average size" in 250 grams of rye.

Amended effective July 1, 1935

Changed the basic method for determining moisture from the Brown-Duvel to the air-oven method or any method giving similar results.



Amended effective July 1, 1941

Provided a special grade for Plump Rye and maximum limits of thin rye in grades Nos. 1, 2, and 3.

Amended effective July 1, 1951

Decreased the maximum limits of thin rye permitted in grades Nos. 1, 2, and 3 from 20, 20, and 30 percent to 10, 15, and 25 percent.

## FEED OATS AND MIXED FEED OATS

Established effective September 1, 1925

Revised effective July 2, 1934

1. Changed the definition for oats so that oats containing more than 10 percent of wild oats was classified as feed oats and was graded under the grades of feed oats rather than as Sample grade Oats as was the case before this change.
2. Established special grades for "Tough," "Bleached," "Weevily," "Smutty," and "Ergoty" feed oats and mixed feed oats.

Amended effective July 1, 1935

1. Changed the basic method for determining moisture from the Brown-Duvel to the air-oven method or any method giving similar results.
2. Added a definition for fine seeds.
3. Changed the special grades for Smutty Feed Oats and Smutty Mixed Feed Oats to provide for percentage determination instead of smut-ball count determination.

Canceled effective June 1, 1959

## GRAIN SORGHUM

Established effective December 1, 1924

Revised effective September 1, 1934

1. Class names were changed from type such as Kafir, Milo, etc., to class names based on color such as White Grain Sorghums, Yellow Grain Sorghums, etc. Some subclass names were based on type characters and others on color.
2. A dockage system was set up instead of the sub factor "Sand, dirt, and finely broken kernels" in factor foreign material and cracked kernels.
3. Musty and sour were included as a reason for Sample grade instead of grading such grain as No. 4.
4. General appearance was eliminated from numerical grades and special grades for "Bright" and "Discolored" established.
5. Added other grains to the definition of cracked kernels and foreign material, and increased the amount allowed in grades Nos. 1 to 3 from 3, 6, and 10 percent to 4, 8, and 12 percent.
6. Damaged kernels definition was revised to include damaged kernels of other grains and nongrain sorghums.
7. Redesignated the grades for Weevily and Smutty grain sorghums as special grades and revised the special grade for Smutty grain sorghums by eliminating odor as a factor and specified a quantity of smut equal to 10 smut masses in 50 grams of grain sorghums.
8. Changed foreign material and cracked kernels to cracked kernels, foreign material and other grains and changed the sieve used to determine this factor from 8/64 of an inch on each side of the triangular hole to 5/64 triangular hole sieve which is a somewhat larger opening.

Amended effective July 1, 1935

1. Required dockage to be expressed in whole percents instead of in whole and halves of a percent.
2. Changed the basic method for determining moisture from the Brown-Duvel to the air-oven method or any method giving similar results.

Revised effective August 1, 1962

1. Provided four classes: Yellow Grain Sorghum, White Grain Sorghum, Brown Grain Sorghum, and Mixed Grain Sorghum. The class Red Grain Sorghums was dropped and all subclasses were eliminated.
2. Provided that white grain sorghum with brown undercoats be classed as Brown Grain Sorghum.
3. Changed the minimum test weight per bushel from 55, 53, 51, and 49 lbs. for grades Nos. 1 to 4 to 57, 55, 53, and 51 pounds.
4. Changed the maximum moisture limits from 14, 15, and 16 percent in grades Nos. 1 through 3 to 13.0, 14.0, and 15.0 percent. No change was made in the maximum moisture limits of grade No. 4.
5. Eliminated the grading factor "non-grain sorghums" and included non-grain sorghum in the definition of other grains.
6. Eliminated the special grades Bright Grain Sorghums and Discolored Grain Sorghums and provided that "Grain Sorghum" which is distinctly discolored shall not be graded higher than No. 3.

## BARLEY

Established effective August 24, 1926

Amended effective September 15, 1927

1. Changed requirements for sound barley in grades Nos. 2 and 3 in the class Barley from 88 to 86 percent in both grades.
2. Changed percentage of oats and wild oats in grades Nos. 2 and 3 in the class Barley from 8 to 10 percent in both grades.
3. Changed the moisture content in grades Nos. 2, 3, and 4, and No. 1 Feed in the class Barley from 14.5 to 15.5 percent for each grade.

Amended effective July 21, 1933

1. Sound barley definition changed to exclude barley which was damaged or materially discolored by blight and/or mold.
2. Sample grade definition changed to include barley with more than 5 percent of barley damaged or materially discolored by blight or mold.
3. Established a grade "Blighted Barley" for barley with more than 2 percent but not more than 5 percent of kernels damaged or materially discolored by blight and/or mold.

Revised effective July 2, 1934

1. Class I barley was divided into two subclasses, Malting Barley and Barley.
2. Eliminated special No. 2 and No. 1 Feed, and adopted 5 numerical grades and Sample grade.
3. Grade requirements for class Black Barley were made the same as for the class Barley.
4. Eliminated the class Two-rowed Barley and established special grade for Two-rowed barley.
5. Eliminated grade factor "General appearance" and required that badly stained or materially weathered barley should not grade higher than No. 4.
6. Adopted a dockage system for the class Barley.
7. Raised the percentage of sound barley in grades No. 2 and No. 3 from 86 and 86 percent to 93 and 90 percent for the class Barley.



8. Changed the basis of grade determination for all factors except dockage, temperature, odor, garlic, and insects in all classes of Barley from the grain as a whole to the grain when free from dockage.
9. Redesignated the grades Bleached, Garlicky, Weevily, Smutty, and Blighted as special grades and established special grades for Test Weight of Western Barley, Bright Western Barley, Stained Western Barley, Two-rowed Barley, Tough Barley, and Ergoty Barley.
10. Eliminated test weight as a numerical grading factor for Western Barley and substituted a special grade "Test Weight of Western Barley."
11. Eliminated skinned kernels as a grading factor except for Malting Barley and increased the limits for broken kernels in all classes except Malting Barley.
12. Eliminated smutty odor as a grading factor in the special grade Smutty.

Amended effective July 1, 1935

Changed the basic method for determining moisture from the Brown-Duvel to the air-oven method or any method giving similar results.

Amended effective July 1, 1937

1. Eliminated the determination of dockage on the basis of specific classes and adopted one method for determining dockage for all classes of barley.
2. Required that heat-damaged and mellow kernels be determined on the basis of the pearled dockage-free grain.
3. Added a definition for damaged barley.

Amended effective July 1, 1950

Revised the special grade for Two-rowed Barley and provided special grades for Choice Malting Two-rowed Western Barley and Malting Two-rowed Western Barley.

Revised effective August 2, 1954

Excluded barley injured by heat, mold, and barley of the special grade Weevily from the definition for Choice Malting Two-rowed and Malting Two-rowed Western Barley, and provided that No. 1 Malting Two-rowed Western Barley be of somewhat higher quality than the No. 2 and No. 3.

Revised effective July 1, 1956

Provided for a subclass "Blue Malting Barley."



2. Provided numerical grades and grade requirements for the subclasses Malting Barley and Blue Malting Barley.
3. Eliminated the class Black Barley and provided that black barley be graded as Mixed Barley.
4. Provided maximum limits of thin barley in each of the numerical grades for all subclasses of the class Barley.
5. Changed the minimum limits of sound barley from 95 and 93 percent in grades No. 1 and No. 2 to 97 and 94 percent.
6. Provided maximum limits of damaged kernels and heat-damaged kernels in each of the numerical grades for the subclass Barley of the class Barley and of damaged kernels in each of the numerical grades for the subclasses Malting Barley and Blue Malting Barley in the class Barley.

Revised effective July 1, 1960

1. Reduced the percentage of skinned and broken kernels in the definition for the subclass Malting Barley from 10.0 percent to 8.0 percent.
2. Reduced the maximum limits of skinned and broken kernels in grades No. 2 and No. 3 of the subclasses Malting Barley and Blue Malting Barley from 7.0 percent and 10.0 percent to 6.0 percent and 8.0 percent.

Amended effective July 1, 1962

1. Provided that barley grown in Alaska be classed as Barley rather than Western Barley.
2. Changed the special grades Choice Malting Two-rowed Western Barley and Malting Two-rowed Western Barley to Choice Malting Two-rowed Barley and Malting Two-rowed Barley to permit the grading of the variety Betzes under these special grades.

## MIXED GRAIN

Established effective July 2, 1934

Amended effective July 25, 1934

Provided that the quantity of smut in the special grade Smutty Mixed Grain in which wheat or rye predominates be increased from 10 to 14 smut balls of average size in 250 grams of grain.

Amended effective July 1, 1935

1. Changed the basic method for determining moisture from the Brown-Duvel to the oven method for the kind of grain which predominates in the mixture or any method which gives equivalent results.
2. Provided that the grade designation for "Mixed Grain" include the name and approximate percentage of each kind of grain in the mixture.
3. Changed the special grade for Smutty Mixed Grain to provide that mixed grain in which oats predominates should be determined on the basis of weight rather than on the basis of number of smut balls in 250 grams of mixed grain.

Revised effective August 1, 1959

1. Added definitions for wild oats and stones.
2. Provided for certain mixtures of oats and wild oats which had previously been graded Feed Oats and Mixed Feed Oats and which did not fall into the oats standards as revised June 1, 1959.

Revised effective December 1, 1960

1. Added a definition for Mixed feed oats.
2. Provided grades for No. 1 and No. 2 Mixed Feed Oats based on the quality factors of foreign material, damaged kernels, heat-damaged kernels and test weight per bushel.

FLAXSEED

Established effective August 1, 1934

Amended effective July 1, 1935

1. Required that dockage be expressed in whole percents instead of in whole and half percents.
2. Changed the basic method for determining moisture from the Brown-Duvel to the air-oven method or any method giving similar results.

## SOYBEANS

### Established effective November 20, 1940

Standards for soybeans were recommended by the U.S. Department of Agriculture in 1925. These standards were revised in 1935 and brought under the U.S. Grain Standards Act by an amendment to the Act in 1940.

### Revised effective September 1, 1941

1. Increased the percentage of splits in grades No. 1 and No. 2 from 1.0 and 10.0 percent to 10 and 15 percent.
2. Reduced the maximum moisture limits from 15.0, 15.0, and 16.5 percent in grades Nos. 1, 2, and 3 to 13, 14, and 16 percent.
3. Established a dockage system based on an 8/64 round hole sieve and expressed on the certificate in terms of whole percent. A fraction of a percent was disregarded.
4. Increased the maximum percent of foreign material from 0.5, 2.0, 4.0, and 6.0 percent in grades Nos. 1 through 4 to 1, 2, 3, and 5 percent.
5. Increased the maximum percent of damaged kernels permitted in grade No. 1 from 1.5 percent to 2 percent.
6. The factor "other colors" was eliminated in the grade table. A footnote was added which applied to the No. 1 and No. 2 grade, providing that grade No. 1 of each of the classes Yellow Soybeans and Green Soybeans may contain not more than 2 percent and that grade No. 2 of each of these classes may contain not more than 3 percent of black, brown, or bicolored soybeans singly or combined.
7. Established a special grade for "Weevily Soybeans."

### Revised effective September 1, 1942

Changed the method of determining moisture from the water oven to the air oven.

### Revised effective September 1, 1949

1. Classifying a part of the foreign material as dockage was eliminated.
2. The maximum limits of splits was increased from 15, 20, and 30 percent for grades Nos. 2, 3, and 4 to 20, 30, and 40 percent.

3. The maximum limits of foreign material were increased from 1, 2, 3, and 5 percent for grades Nos. 1 through 4 to 2.0, 3.0, 4.0, and 6.0 percent. This change was necessary due to elimination of the dockage factor.
4. The definitions for the classes of Yellow Soybeans and Green Soybeans was changed to provide that all soybeans with yellow or green seedcoats which were yellow in cross section be classified as Yellow Soybeans and only soybeans that were green in cross section and had green seedcoats be classified as Green Soybeans.
5. Established a special grade for Garlicky Soybeans.

Revised effective September 1, 1955

1. Reduced the foreign material in the numerical grades from 2.0, 3.0, 4.0, and 6.0 percent to 1.0, 2.0, 3.0, and 5.0 percent.
2. Fixed special limits on heat damage of 0.2, 0.5, 1.0, and 3.0 percent in the several grades.
3. Redefined splits as pieces of soybeans that are not damaged.
4. Required that purple mottled and stained soybeans not be graded higher than No. 3.

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